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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
SHERR, CRISTINA O	

ART UNIT	PAPER NUMBER
3621	

DATE MAILED: 05/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/482,156	TROSTLE ET AL.	
	Examiner	Art Unit	
	Cristina O Sherr	3621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 March 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

1. This action is in response to Applicant's Appeal brief filed 2 March 2003. Examiner has carefully considered Applicant's Appeal and hereby reopens prosecution on this application.

2. Claims 1 – 30 are pending in this case. Applicant's arguments, see Appeal brief, filed 2 march 2003, with respect to the rejections of claims 1 - 30 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1- 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Angelo et al (US 6,119,228A).

5. Regarding claim 1 –

Angelo discloses a method for securely establishing communication in a multicast group of nodes of a network, in which the network includes publisher nodes, subscriber nodes, a multi-master directory that stores information about events in the network and that can authenticate the subscriber nodes and the publisher nodes, whereby each of the subscriber nodes and the publisher nodes receives a unique private key and that can

determine events that the subscribers and the publishers may process, the method comprising the steps of registering the subscribers and the publishers with an event server configured to determine whether the publishers are authorized to produce certain events corresponding to the event types and whether the subscribers are authorized to receive the certain events in response to the step of accessing; generating, with the event server, a group session key for establishing one of the multicast groups, the group session key being encrypted in a message that has a prescribed format (Col. 3 ln 21 – 63).

6. Regarding claim 2 –

Angelo discloses the method as recited in Claim 1, further comprising the steps of: receiving a message from the subscribers in response to the subscribers determining whether the received message corresponds to a correct key version; updating the group session key; and selectively reregistering the subscribers at the event server (Col. 3 ln 21 – 63).

7. Regarding claim 3 –

Angelo discloses the method as recited in Claim 1, wherein the prescribed format of the message conforms to lightweight directory access protocol (LDAP) (Col. 3 ln 21 – 63).

8. Regarding claim 4 –

Angelo discloses the method as recited in Claim 1, wherein the prescribed format of the message comprises a protocol version number field, a message type field, and a message length field (Col. 3 ln 21 – 63).

9. Regarding claim 5 –

Angelo discloses the method as recited in Claim 1, wherein the step of authenticating comprises controlling access by the directory in conjunction with utilizing an external authentication service that allows extending membership of the multicast groups to subscribers with no corresponding objects in the directory (Col. 3 In 21 – 63).

10. Regarding claim 6 –

Angelo discloses the method as recited in Claim 1, wherein the external authentication service is supplied by a Kerberos server (Col. 3 In 21 – 63).

11. Regarding claim 7 –

Angelo discloses the method as recited in Claim 1, wherein the event server manages the private keys of the subscribers and the publishers (Col. 3 In 21 – 63).

12. Regarding claim 8 –

Angelo discloses the method as recited in Claim 1, wherein the step of updating comprises creating a new group session key; modifying the objects based upon the new group session key by using a change password protocol; sending a new message that contains the new group session key to the subscribers; and notifying the subscribers to reregister (Col. 3 In 21 – 63).

13. Regarding claim 9 –

Angelo discloses the method as recited in Claim 1, wherein the step of registering comprises performing access control check of the subscribers by the event server (Col. 3 In 21 – 63).

14. Claims 10-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Angelo et al (US 6,119,228A).

15. Regarding claim 10 –

Angelo discloses a communication system for creating a plurality of secure multicast groups in a network that includes a plurality of principals configured for functioning as a subscriber and a publisher, each of the principals having a private key, a multi-master directory comprising a directory server for communicating with one or more of the principals to authenticate each of the principals and to provide access control, the multi-master directory controlling access on a per object and per attribute basis, the communication system comprising: an event server coupled to the plurality of principals for registering the plurality of principals and for determining whether the principals are authorized to produce certain events when the principals are functioning as publishers and whether the principals are authorized to receive the certain events when the principals are functioning as subscribers, and means in the event server for creating a group session key for establishing one of the multicast groups, by distributing the group session key in an encrypted message to the subscribers, the encrypted message encapsulating the group session key according to a prescribed format; means in the event server for updating the group session key by utilizing a change password protocol to modify an object in the directory; means in the event server for notifying the subscribers to reregister in response to the updating of the group session key (Col. 3 ln 21 – 63).

16. Regarding claim 11 –

Angelo discloses the communication system as recited in Claim 10, wherein the directory server is collocated with the event server, the directory server and the event server participating in a common one of the multicast groups (Col. 3 In 21 – 63).

17. Regarding claim 12 –

Angelo discloses the communication system as recited in Claim 10, wherein the prescribed format of the message conforms to lightweight directory access protocol (LDAP) (Col. 3 In 21 – 63).

18. Regarding claim 13 –

Angelo discloses the communication system as recited in Claim 10, wherein the directory authenticates by controlling access in conjunction with utilizing an external authentication service that allows extending membership of the multicast groups to subscribers with no corresponding objects in the directory (Col. 3 In 21 – 63).

19. Regarding claim 14 –

Angelo discloses the communication system as recited in Claim 13, wherein the external authentication service is supplied by a Kerberos server (Col. 3 In 21 – 63).

20. Regarding claim 15 –

Angelo discloses the communication system as recited in Claim 10, wherein the prescribed format of the message comprises a protocol version number field, a message type field, and a message length field (Col. 3 In 21 – 63).

21. Regarding claim 16 –

Angelo discloses the communication system as recited in Claim 10, wherein the event server manages the private keys (Col. 3 In 21 – 63).

22. Regarding claim 17 –

Angelo discloses the communication system as recited in Claim 10, wherein the event server updates the group session key by performing the steps of creating a new group session key; modifying the objects based upon the new group session key by using a change password protocol; sending a new message that contains the new group session key to the subscribers; and notifying the subscribers to reregister (Col. 3 ln 21 – 63).

23. Regarding claim 18 –

Angelo discloses the communication system as recited in Claim 10, wherein the event server performs access control check of the subscribers during registration of the subscribers (Col. 3 ln 21 – 63).

24. Claims 19-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Angelo et al (US 6,119,228A).

25. Regarding claim 19 –

Angelo discloses a computer system for establishing multiple secure multicast groups, the computer system comprising a communication interface for communicating with a plurality of nodes and for interfacing a multi-master directory to authenticate the computer system and the plurality of nodes, the multi-master directory having access controls on a per object and per attribute basis, wherein the nodes access the directory to determine events that the nodes may process, a bus coupled to the communication interface for transferring data; one or more processors coupled to the bus for selectively generating a group session key and private keys corresponding to the plurality of nodes,

the group session key being updated by utilizing a change password protocol to modify an object corresponding to the events in the directory; and a memory coupled to the one or more processors via the bus, the memory including one or more sequences of instructions which when executed by the one or more processors cause the one or more processors to perform the steps of registering the plurality of nodes, determining whether the nodes are authorized to produce and authorized to receive certain events corresponding to objects of the directory, distributing the group session key to the nodes via a message, the message encapsulating the group session key according to a prescribed format, and selectively reregistering the nodes in response to updating the group session key (Col. 3 In 21 – 63).

26. Regarding claim 20 –

Angelo discloses the computer system as recited in Claim 19, wherein the directory server is collocated with the event server, the directory server and the event server participating in a common one of the multicast groups (Col. 3 In 21 – 63).

27. Regarding claim 21 –

Angelo discloses the computer system as recited in Claim 19, wherein the prescribed format of the message conforms to light weight directory access protocol (LDAP) (Col. 3 In 21 – 63).

28. Regarding claim 22 –

Angelo discloses the computer system as recited in Claim 19, wherein the directory authenticates by using authentication services of the directory in conjunction with a

Kerberos service that allows extending membership to the multicast groups to nodes with no objects in the directory (Col. 3 ln 21 – 63).

29. Regarding claim 23 –

Angelo discloses the computer system as recited in Claim 19, wherein the event server manages private keys of the plurality of nodes (Col. 3 ln 21 – 63).

30. Regarding claim 24 –

Angelo discloses the computer system as recited in Claim 19, wherein the event server updates the group session key by performing the steps of creating a new group session key; modifying the objects based upon the new group session key by using a change password protocol; sending a new message that contains the new group session key to the subscribers; and notifying the subscribers to reregister (Col. 3 ln 21 – 63).

31. Regarding claim 25 –

Angelo discloses the computer system as recited in Claim 19, wherein the computer system performs access control check of the nodes during registration (Col. 3 ln 21 – 63).

32. Claims 26-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Angelo et al (US 6,119,228A).

33. Regarding claim 26 –

Angelo discloses a computer-readable medium carrying one or more sequences of instructions for securely establishing communication in a multicast group of nodes of a network, in which the network includes publisher nodes, subscriber nodes, a multi-master directory that stores information about events in the network and that can

authenticate the subscriber nodes and the publisher nodes, whereby each of the subscriber nodes and the publisher nodes receives a unique private key and that can determine events that the subscribers and the publishers may process, wherein execution of the one or more sequences of instructions by one or more processors causes the one or more processors to perform the steps of: registering the subscribers and the publishers with an event server, the event server determining whether the publishers are authorized to produce certain events corresponding to the event types and whether the subscribers are authorized to receive the certain events in response to the step of accessing; generating a group session key for establishing one of the multicast groups, the group session key being encrypted in a message that has a prescribed format (Col. 3 ln 21 – 63).

34. Regarding claim 27 –

Angelo discloses a computer-readable medium as recited in Claim 26, further comprising the steps of: receiving a message from the subscribers in response to the subscribers determining whether the received message corresponds to a correct key version; updating the group session key; and selectively reregistering the subscribers at the event server (Col. 3 ln 21 – 63).

35. Regarding claim 28 –

Angelo discloses a computer-readable medium as recited in Claim 26, wherein the step of authenticating comprises controlling access by the directory in conjunction with utilizing an external authentication service that allows extending membership of the

multicast groups to subscribers with no corresponding objects in the directory (Col. 3 ln 21 – 63).

36. Regarding claim 29 –

Angelo discloses a computer-readable medium as recited in Claim 26, wherein the step of updating comprises: creating a new group session key; modifying the objects based upon the new group session key by using a change password protocol; sending a new message that contains the new group session key to the subscribers; and notifying the subscribers to reregister (Col. 3 ln 21 – 63).

37. Regarding claim 30 –

Angelo discloses a computer-readable medium as recited in Claim 26, wherein the step of registering comprises performing access control check of the subscribers by the event server (Col. 3 ln 21 – 63).

Conclusion

38. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

39. Stubblebine (US 6,216,231B1) discloses security protocols and policy constraints in distributed systems.

40. Bowman-Amuah (US 6,332,163B1) discloses a method for providing communication services over a computer network system.

41. Examiner's note: Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are

applied to the specific limitations within the individual claim, other passages and figures may be applied as well. It is respectfully requested from the applicant, in preparing the responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention as well as the context of the passage as taught by the prior art or disclosed by the examiner.

42. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cristina O Sherr whose telephone number is 703-305-0625. The examiner can normally be reached on Monday through Friday 8:30 to 5:00.

43. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Trammell can be reached on 703-305-9768. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

44. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

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May 1, 2003

JAMES P TRAMMELL
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